DOCUMENT RESUME

ED 359 318 CE 061 882

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TITLE	What Works: When Teachers Integrate Vocational & Academic Education.
INSTITUTION	National Center for Research in Vocational Education, Berkeley, CA.
SPONS AGENCY	Office of Vocational and Adult Education (ED), Washington, DC.
PUB DATE	Aug 92
CONTRACT	V051A80004-90A
NOTE	9p.
AVAILABLE FROM	NCRVE Materials Distribution Service, Horrabin Hall 46, Western Illinois University, Macomb, IL 61455 (order no. MDS-163: $2).
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Academic Education; Demonstration Programs; *Educational Planning; *Educational Strategies; High Schools; *Integrated Curriculum; Models; Teaching Methods; *Vocational Education
IDENTIFIERS	*SREB Vocational Education Consortium

ABSTRACT

This paper summarizes strategies that have been successfully implemented at 3 of the 40 pilot sites working toward the goal of improving the academic competencies of students completing high school vocational programs. The strategies were culled from 30 interviews with academic teachers, vocational teachers, counselors, vocational directors, principals, a supervisor, and a remediation specialist at the three selected sites (a comprehensive high school and two vocational centers that serve four feeder high schools) operated by the Southern Regional Education Board/Vocational Education Consortium. A total of 215 strategies were summarized in 4 categories: (1) instructional strategies; (2) curricular strategies; (3) cooperative efforts between vocational and academic teachers, and (4) administrative practices and procedures. The 69 strategies highlighted in this paper are those actually used to achieve the integration of vocational and academic education at the school-site level. (KC)

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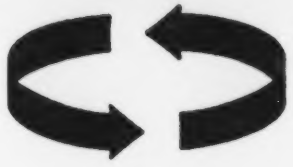
What Works



When Teachers Integrate Vocational & Academic Education

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Supported by
The Office of Vocational and Adult Education,
U.S. Department of Education

August, 1992

MDS-163

CE061822

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FUNDING INFORMATION

Project Title:	National Center for Research in Vocational Education
Grant Number:	V051A80004-90A
Act under which Funds Administered:	Carl D. Perkins Vocational Education Act P.L. 98-524
Source of Grant:	Office of Vocational and Adult Education U.S. Department of Education Washington, DC 20202
Grantee:	The Regents of the University of California National Center for Research in Vocational Education 1995 University Avenue, Suite 375 Berkeley, CA 94704
Director:	Charles S. Benson
Percent of Total Grant Financed by Federal Money:	100%
Dollar Amount of Federal Funds for Grant:	$5,675,000
Disclaimer:	This publication was prepared pursuant to a grant with the Office of Vocational and Adult Education, U.S. Department of Education. Grantees undertaking such projects under government sponsorship are encouraged to express freely their judgement in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official U.S. Department of Education position or policy.
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Overview

The Carl D. Perkins Vocational and Applied Technology Education Act (VTEA) of 1990 emphasizes the need for strengthening the academic foundations of students in vocational programs. It calls for funding programs that integrate vocational and academic education through coherent sequences of courses so that students achieve occupational and academic competencies. A number of efforts are underway at local levels to implement innovative programs for achieving this integration. The Southern Regional Education Board/Vocational Education Consortium (SREB/VEC) includes seventeen states with more than forty pilot sites working toward the goal of improving the academic competencies of students completing high school vocational programs. SREB/VEC is advancing, applying, and evaluating approaches that will strengthen these competencies.

At SREB/VEC pilot sites, various instructional, curricular, and administrative intervention strategies have been implemented. This publication is based on the outcomes of a National Center for Research in Vocational Education (NCRVE) project* that focused on identifying strategies used at three of the pilot sites and examining faculty and administrators' perceptions of the effectiveness of the strategies. For the project, individuals were interviewed at three selected sites where a number of innovative strategies were being tried to improve the academic competencies of students completing high school vocational programs. Many of the strategies require extensive collaboration between vocational and academic faculty.

One of the selected sites is a comprehensive high school, while the other two each have vocational centers that serve four feeder high schools. At each of the three sites, ten individuals were interviewed over a two-day period. For the thirty interviews, nine academic teachers, eleven vocational teachers, three counselors, three vocational directors, two principals, one supervisor, and one remediation specialist were interviewed.

From interview responses to items asking for descriptions of strategies implemented at the three sites, a total of two-hundred fifteen statements were compiled. These statements were then summarized under four categories: (1) instructional strategies, (2) curricular strategies, (3) cooperative efforts between vocational and academic teachers, and (4) administrative practices and procedures.

This publication highlights strategies from the four categories that the individuals interviewed found to be effective. These strategies are ones actually used to achieve the integration of vocational and academic education at the "grass roots," school-site level. They provide a frame of reference for others working to achieve this integration in similar settings.

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* The project report, *Collaborative Efforts Between Vocational and Academic Teachers: Strategies That Facilitate and Hinder the Efforts*, is available through the NCRVE Materials Distribution Service, (800) 637-7652.

Effective Curricular Strategies

- Revise the curriculum to eliminate the general track and develop study plans for all students accordingly.
- Have counselors, vocational teachers, and academic teachers work together to develop plans for all vocational offerings—plans that prepare students for continued study at a four-year institution or in a postsecondary technical program in addition to immediate job-entry preparation.
- Have students adopt one of three plans—vocational, academic, or combined—as soon as possible, preferably by the time they enter ninth grade. The combined plan is not the old "general track," rather it provides both vocational and academic preparation.
- Provide teachers and counselors with examples showing them that in the past the policy of "no plan of study" locked students into "no future."
- Help academic teachers see the value of combining vocational and academic preparation. They will then be able to emphasize to their students the value of this preparation.
- Survey area employers to determine the use of technology and basic skills in various work settings; then use survey findings as a basis for changes in both vocational and academic offerings.
- Learn from employers which basic skills are needed on the job and then have vocational and academic teachers work together to stress them in their instruction.
- Restructure general (basic academic) courses so that they become applied courses—courses that relate learning to the real world, so students can see the validity of what they are learning. Have vocational and academic teachers work together to develop instructional examples for applied offerings.
- Inform students of curricular changes and reasons for them. Students perceive teachers more positively when they learn that vocational and academic teachers are working together.
- Help academic teachers learn to rely less on text-based instruction and to rely more on vocational teachers as a resource for teaching real world applications.
- Emphasize importance of vocational and academic teachers relating their instruction to applied uses. This helps eliminate the problem of students having to tell their new employers that they have not learned even the most basic skills for the work setting.
- Update library holdings so that they support a revised, applied curriculum.
- Make remedial instruction readily available to students who need it, particularly to help them meet academic skill requirements for vocational offerings.
- Institute a daily reading period of fifteen to twenty minutes when all students and teachers drop everything and read whatever interests them, not homework assignments nor other class related materials.
- Have all teachers include basic skills objectives and instructional activities in their lesson plans and constantly evaluate attainment of the skills.

Effective Instructional Strategies

- Encourage teachers to have higher expectations for their students, particularly in their use of basic academic skills.
- Assign meaningful homework on a regular basis, including in vocational classes. Establish expectations that homework be completed.
- Develop coordinated instructional plans between vocational and academic teachers—plans that reinforce instructional objectives, strategies, and content in both areas.
- Have vocational teachers serve as guest speakers in academic classes to reinforce the need for what academic teachers are teaching.
- Use vocational student organization projects as a springboard for having vocational and academic teachers work together.
- Have vocational and academic teachers agree to reinforce the same basic academic skills for a particular period of time—for example, a grading period or several weeks.
- Have vocational and academic teachers develop cooperative assignments.
- Have academic teachers borrow equipment/supplies from vocational laboratories to illustrate actual math and science applications.
- Have vocational teachers incorporate academic skills in their day-to-day instruction, not try to teach students through drill and practice procedures.
- Have academic teachers prepare bulletin boards that illustrate vocational applications of skills taught in their classes and vice versa.
- Keep lists of academic skills that the vocational and academic teachers have agreed to emphasize on display in vocational classrooms.
- Have all students, vocational and academic, provide both oral and written responses in complete sentences.
- Encourage vocational and academic teachers to compare what they are teaching in respect to basic academic competencies to assure that they are teaching the same things.
- Pretest students on basic academic skills needed to succeed in vocational classes, then offer remedial instruction only as needed.
- Provide vocational teachers with professional development activities so they can gain the expertise needed to teach basic academic skills.
- Provide professional development activities for achieving integration that focus on vocational and academic teachers when both types of teachers participate in the same activities.
- Establish procedures for academic teachers to follow when borrowing or using equipment from vocational teachers to assure proper use.
- Supply academic teachers with adequate equipment, tools, supplies, and training that supports the teaching of real-world applications of what students are learning.
- Provide opportunities for vocational and academic teachers to plan together in small groups, preferably in pairs, to facilitate exchange of information and to develop coordinated instruction. Further, establish procedures for evaluation of their cooperative efforts.

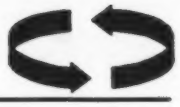
Effective Cooperative Efforts

- Have vocational teachers share projects that students complete in their classes with academic teachers. The projects can be used for further study in the academic classes.
- Provide time for academic teachers to observe and experience hands-on activities of ongoing instruction in vocational classes. Similarly, provide time for vocational teachers to observe ongoing instruction in academic classes.
- Encourage academic teachers to borrow books and other resource materials from vocational teachers and vice versa.
- Have vocational and academic teachers share, on a regular basis, competency lists, so they can learn the basic competencies the others teach or need students to know.
- Have teachers emphasize the same academic competencies and teach coordinated information about their use when vocational and academic teachers share students between their classes.
- Have academic teachers identify specific academic competencies they would like the vocational teachers to emphasize and vice versa.
- Provide extra time and incentives for vocational and academic teachers to work together, particularly when vocational teachers are located at vocational centers and have little regular contact with academic teachers.
- Assure that academic teachers feel they are part of the integration movement by involving them in the development of integration goals and objectives from the start.
- Emphasize to vocational teachers the complexity of learning and applying basic academic skills—skills that cannot be taught in isolation by academic teachers alone.
- Have vocational and academic teachers share class rolls, so they will know which of their students are in the others' classes.
- Eliminate the dichotomy that exists between vocational and academic programs by having teachers work together to focus on the needs of students, students that both vocational and academic teachers have in their classes.
- Provide adequate planning time for academic teachers to incorporate real-world examples in their instruction, planning time shared with vocational teachers.

Effective Administrative Practices and Procedures

- Establish a positive climate for the change process and involve all teachers.
- Help teachers develop ownership in the changes that are taking place by having them assume as many leadership responsibilities as possible.
- Publicize to the students, parents, and community the purposes and anticipated outcomes of the cooperative efforts being undertaken by the vocational and academic teachers.
- Let teachers know of administrative support for the changes in instruction through informal as well as formal channels of communication.
- Provide for staff development, with clearly defined outcome goals, that involves all vocational and academic teachers.
- Provide for staff development on an ongoing basis, avoiding a one-shot, quick-fix approach.
- Create a staff development environment that is free from distractions of the day-to-day routine of school operation.
- Divide teachers into small work groups when asking them to cooperate on various aspects of vocational and academic integration. Carefully assign teachers to the groups to facilitate positive outcomes.
- Provide open, unstructured time in a relaxed atmosphere for vocational and academic teachers to share.
- Provide incentives for teachers to be involved in planning and implementing innovative strategies for integrating vocational and academic education.
- Assure that guidance counselors are involved in all stages of the change process and that they support the concept of integration.
- Survey teachers, guidance counselors, and students to gain insight as to their perceptions and acceptance of the changes being undertaken.
- Have both vocational and academic teachers take time to ask students what they think they are learning and why.
- Review overall plans and strategies for achieving the integration of vocational and academic education with the teachers on a periodic basis—at least twice a year.
- Move classroom locations, whenever possible, of both vocational and academic teachers so that they will have more ready access to one another.
- When vocational offerings are provided at a vocational center, designate a teacher at the center and one at each feeder school as site coordinators for achieving integration.
- Designate responsible students as carriers of information between the vocational center and the feeder schools to eliminate central office delays.
- Provide teachers, students, and public groups accurate information reflecting measurable outcomes of integration.
- Assure that all administrators display commitment to the concept of integration, not just vocational.
- Monitor professional development activities contracted to outside sources to assure that they are meeting the needs of both vocational and academic teachers.

Effective Administrative Practices and Procedures



- Monitor planning and instruction of both vocational and academic teachers to assure that changes agreed upon to achieve the goals of integration are actually occurring.

- Update teacher evaluation procedures to reflect changes in teaching that occur due to the integration movement and increased emphasis on applied learning.

- Encourage uniform attendance and tardiness rules at both vocational centers and feeder schools.